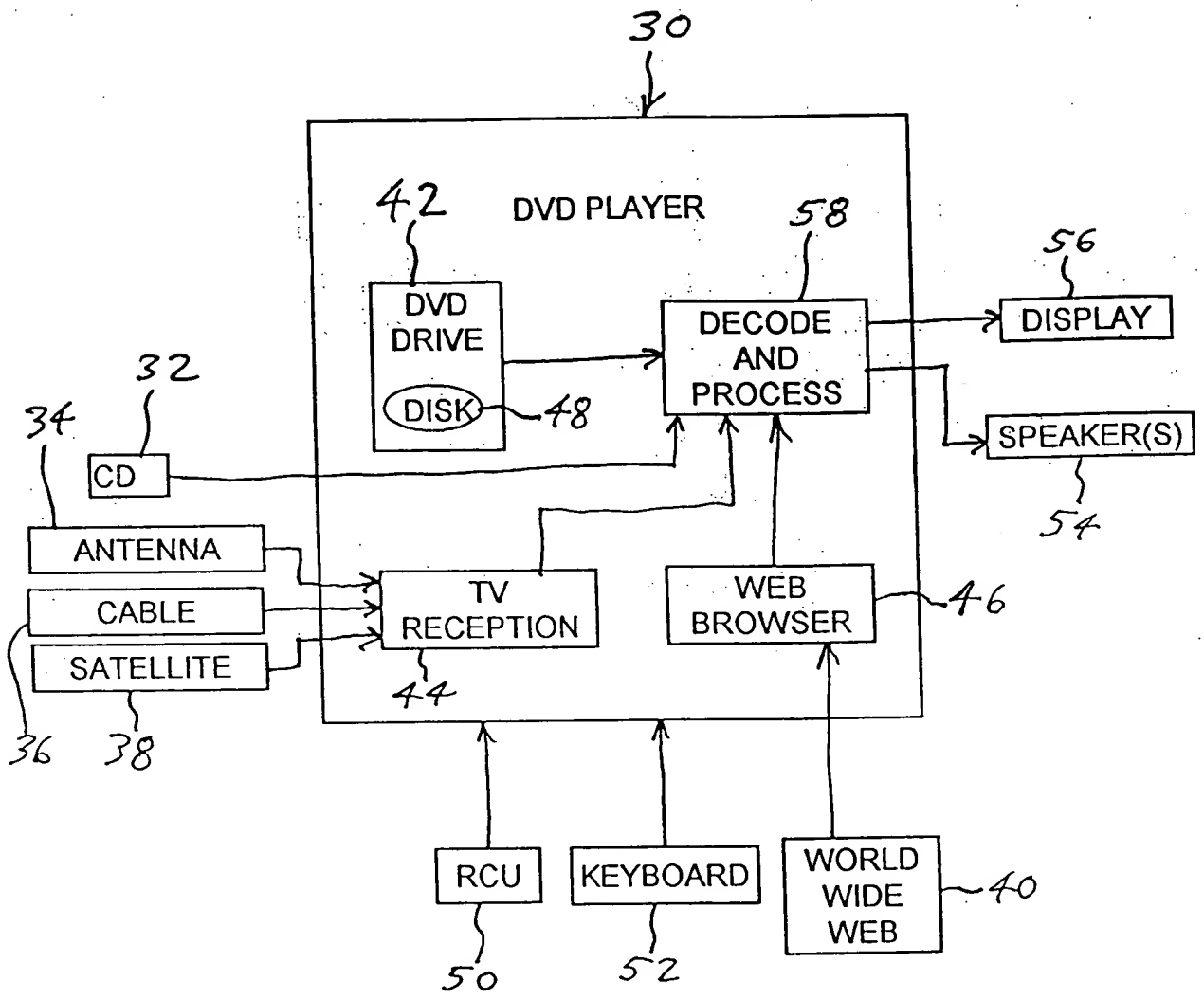
30
DVD PLAYER
42
58
56
DVD DRIVE
DISK
48
DECODE AND PROCESS
DISPLAY
32
34
CD
SPEAKER(S)
54
ANTENNA
CABLE
SATELLITE
TV RECEPTION
44
WEB BROWSER
46
36
38
RCU
KEYBOARD
WORLD WIDE WEB
40
50
52

Fig. 1

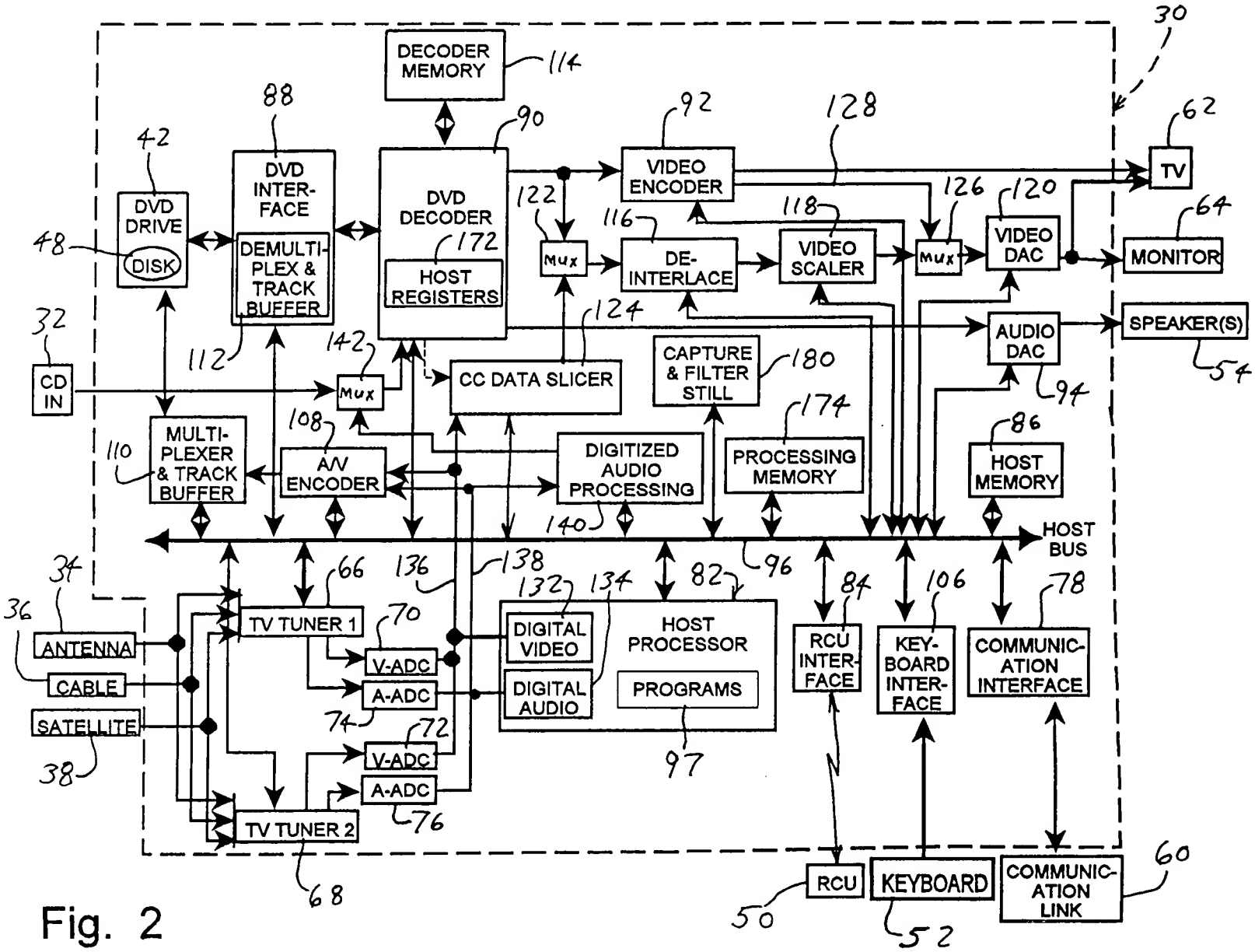
30
DECODER MEMORY
114
88
90
92
128
62
42
DVD INTER-FACE
DVD DECODER
VIDEO ENCODER
TV
DVD DRIVE
DISK
48
DEMULTI-PLEX & TRACK BUFFER
172
HOST REGISTERS
122
116
118
126
120
MUX
DE-INTERLACE
VIDEO SCALER
MUX
VIDEO DAC
64
MONITOR
32
124
AUDIO DAC
SPEAKER(S)
54
CD IN
112
142
MUX
CC DATA SLICER
CAPTURE & FILTER STILL
180
94
174
108
86
110
MULTI-PLEXER & TRACK BUFFER
A/V ENCODER
DIGITIZED AUDIO PROCESSING
PROCESSING MEMORY
HOST MEMORY
140
HOST BUS
96
34
66
136
138
132
134
82
84
106
78
36
TV TUNER 1
70
DIGITAL VIDEO
HOST PROCESSOR
RCU INTER-FACE
KEY-BOARD INTER-FACE
COMMUNIC-ATION INTERFACE
ANTENNA
V-ADC
CABLE
A-ADC
DIGITAL AUDIO
PROGRAMS
74
97
SATELLITE
72
38
V-ADC
A-ADC
76
TV TUNER 2
68
RCU
KEYBOARD
COMMUNIC-ATION LINK
60
50
52

Fig. 2

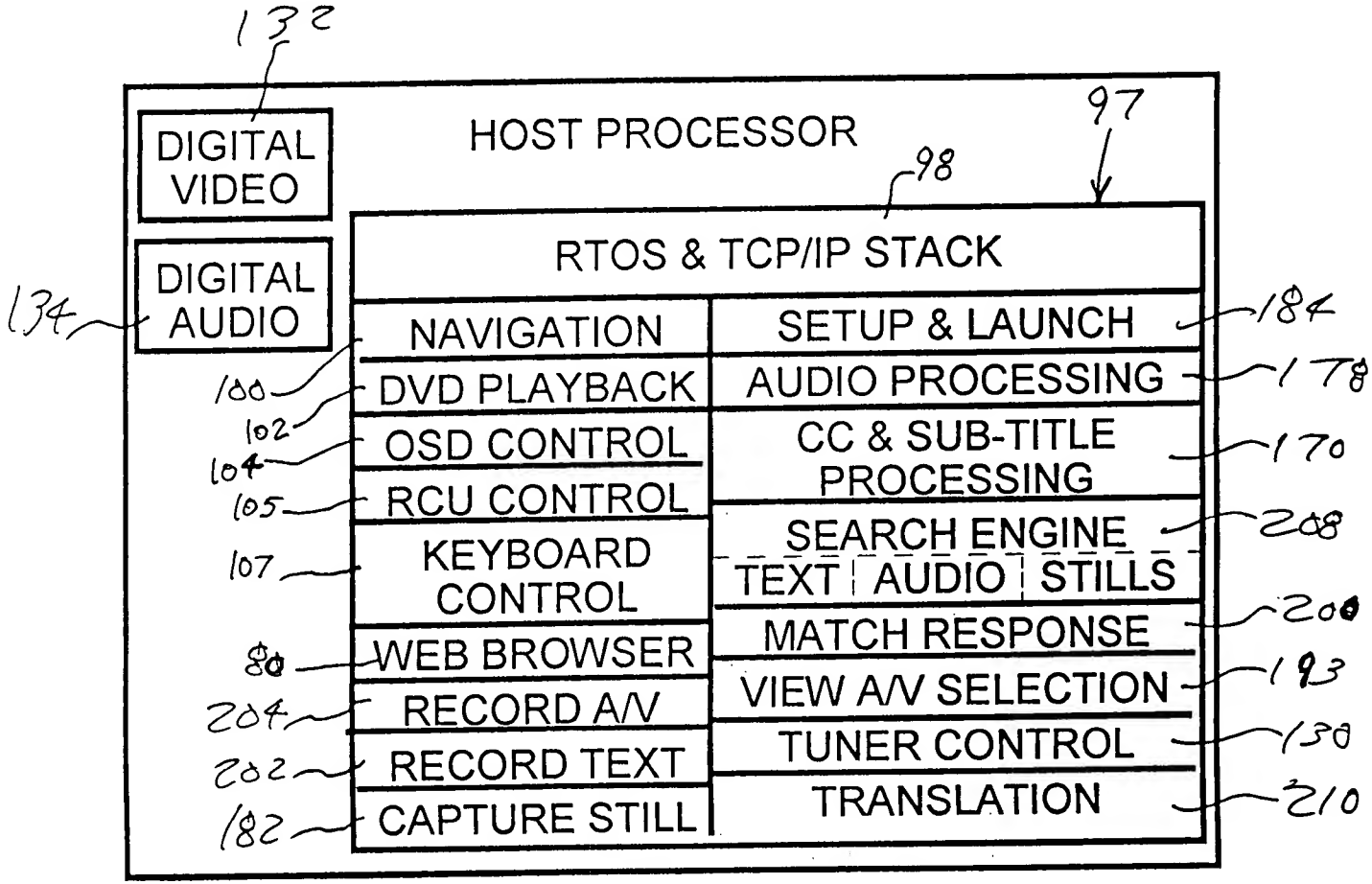
132
DIGITAL VIDEO
DIGITAL AUDIO
134
HOST PROCESSOR
97
98
RTOS & TCP/IP STACK
NAVIGATION
SETUP & LAUNCH
184
100
DVD PLAYBACK
AUDIO PROCESSING
178
102
OSD CONTROL
CC & SUB-TITLE PROCESSING
170
104
105
RCU CONTROL
SEARCH ENGINE
208
107
KEYBOARD CONTROL
TEXT
AUDIO
STILLS
206
80
WEB BROWSER
MATCH RESPONSE
193
204
RECORD A/V
VIEW A/V SELECTION
130
202
RECORD TEXT
TUNER CONTROL
210
182
CAPTURE STILL
TRANSLATION

Fig. 3

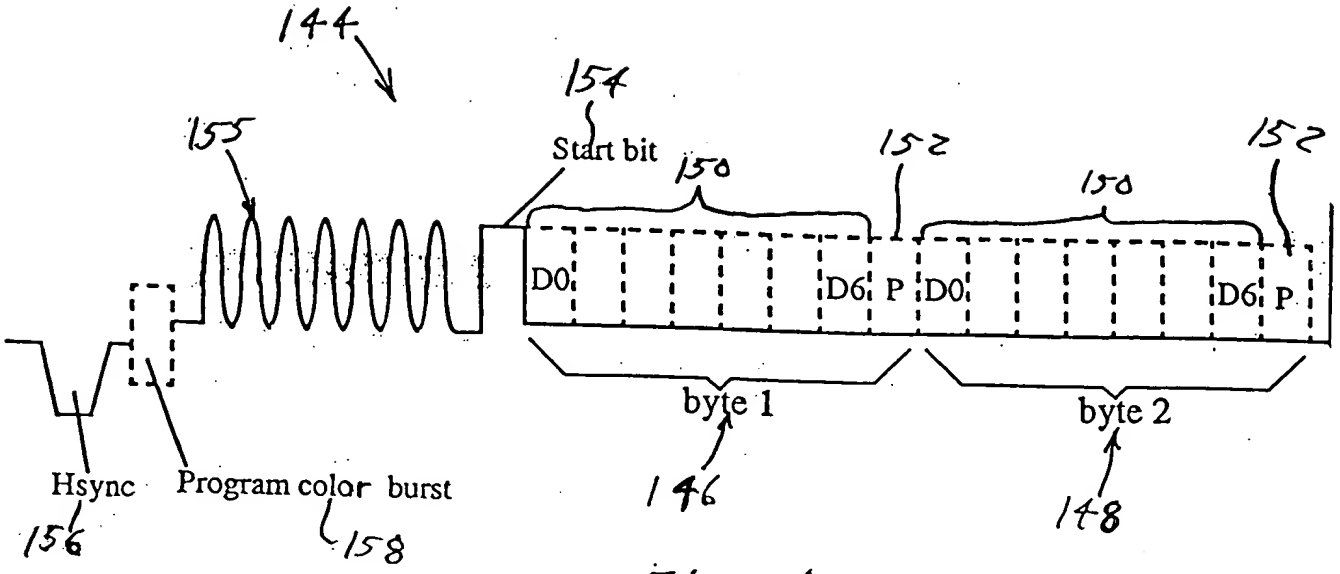
144
154
155
Start bit
150
152
150
152
D0
D6
P
D0
D6
P
byte 1
byte 2
Hsync
Program color burst
156
158
146
148

FIG. 4

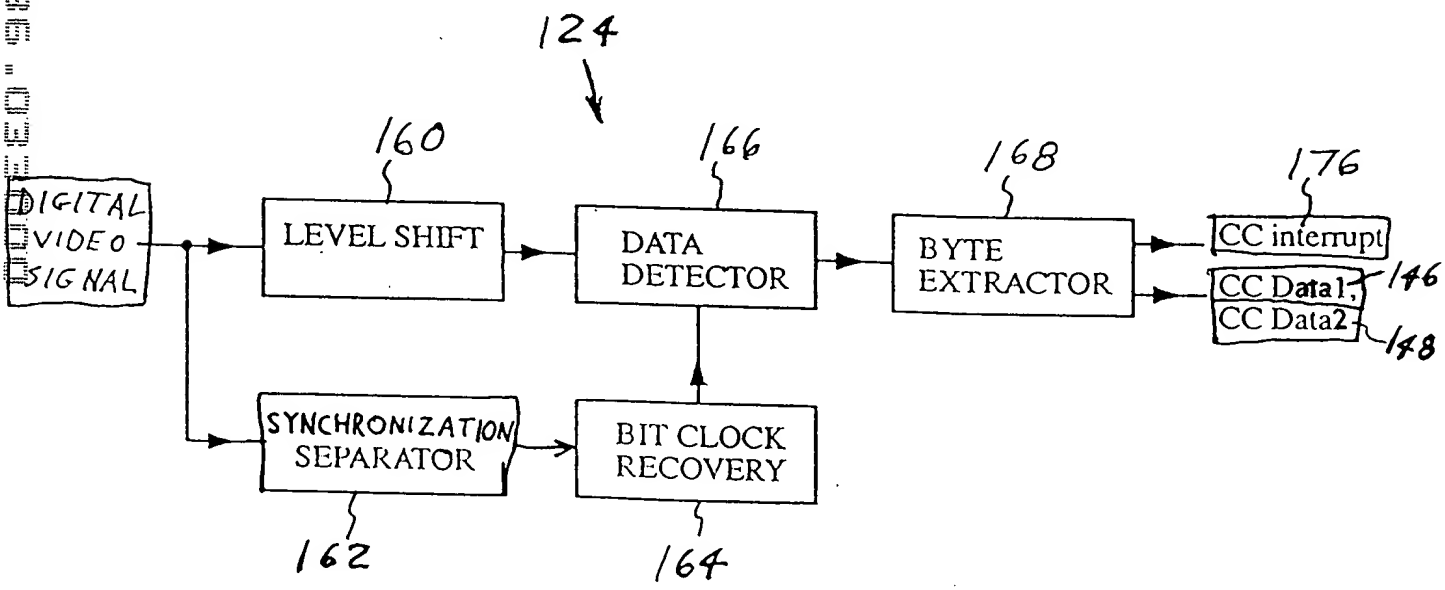
124
160
166
168
176
DIGITAL VIDEO SIGNAL
LEVEL SHIFT
DATA DETECTOR
BYTE EXTRACTOR
CC interrupt
CC Data1
CC Data2
146
148
SYNCHRONIZATION SEPARATOR
BIT CLOCK RECOVERY
162
164

FIG. 5

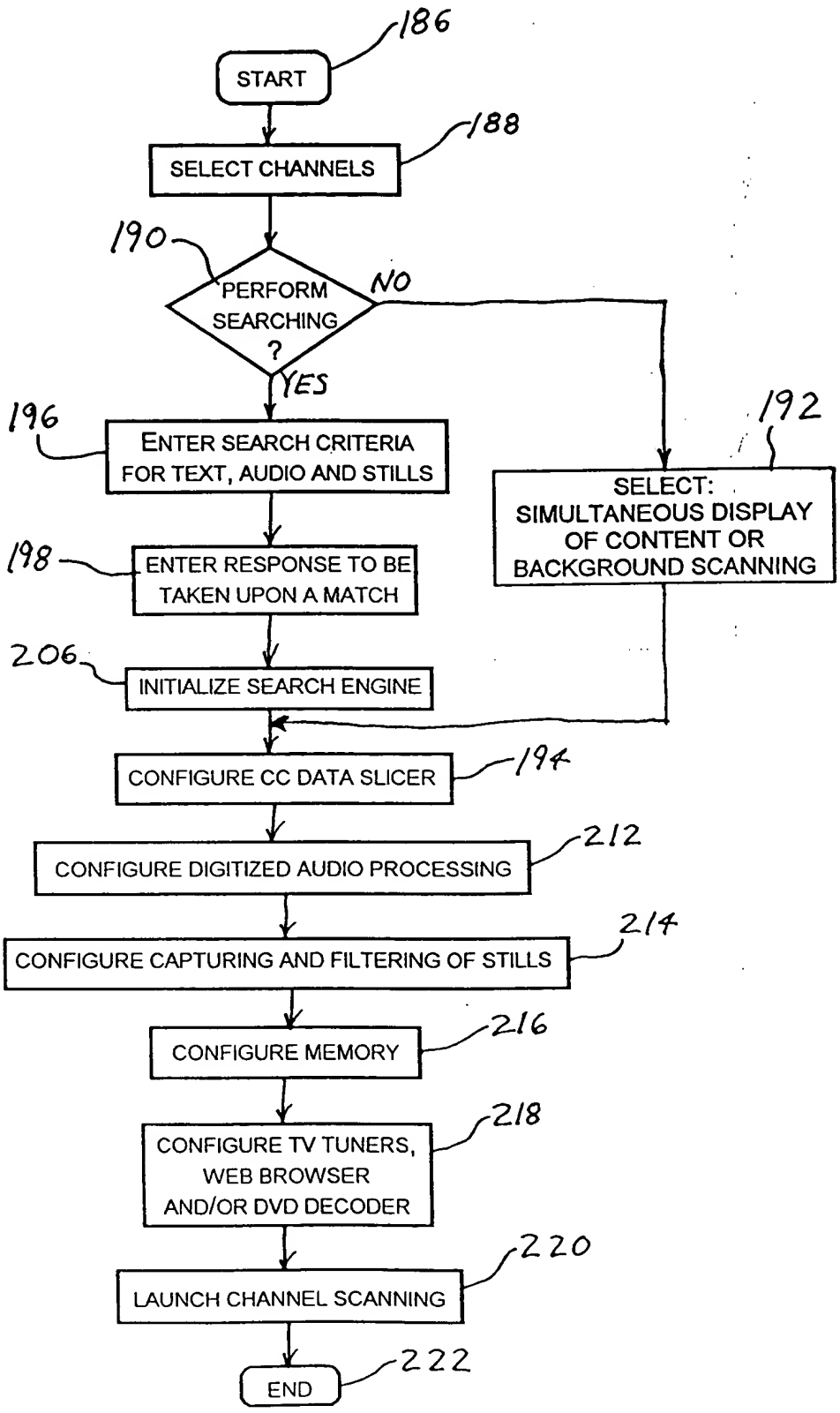
186
START
188
SELECT CHANNELS
190
PERFORM SEARCHING ?
NO
YES
196
ENTER SEARCH CRITERIA FOR TEXT, AUDIO AND STILLS
192
SELECT: SIMULTANEOUS DISPLAY OF CONTENT OR BACKGROUND SCANNING
198
ENTER RESPONSE TO BE TAKEN UPON A MATCH
206
INITIALIZE SEARCH ENGINE
194
CONFIGURE CC DATA SLICER
212
CONFIGURE DIGITIZED AUDIO PROCESSING
214
CONFIGURE CAPTURING AND FILTERING OF STILLS
216
CONFIGURE MEMORY
218
CONFIGURE TV TUNERS, WEB BROWSER AND/OR DVD DECODER
220
LAUNCH CHANNEL SCANNING
222
END

Fig. 6

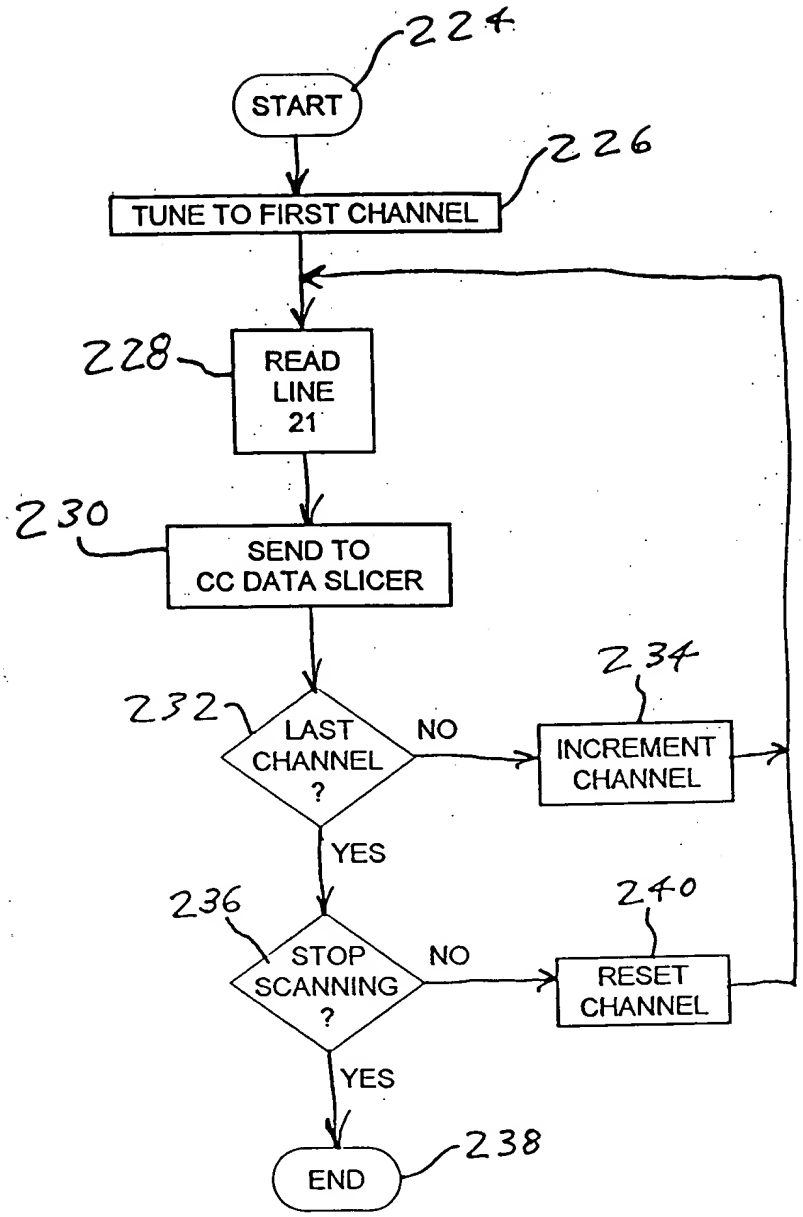
224
START
226
TUNE TO FIRST CHANNEL
228
READ LINE 21
230
SEND TO CC DATA SLICER
232
LAST CHANNEL ?
NO
234
INCREMENT CHANNEL
YES
236
STOP SCANNING ?
NO
240
RESET CHANNEL
YES
238
END

Fig. 7

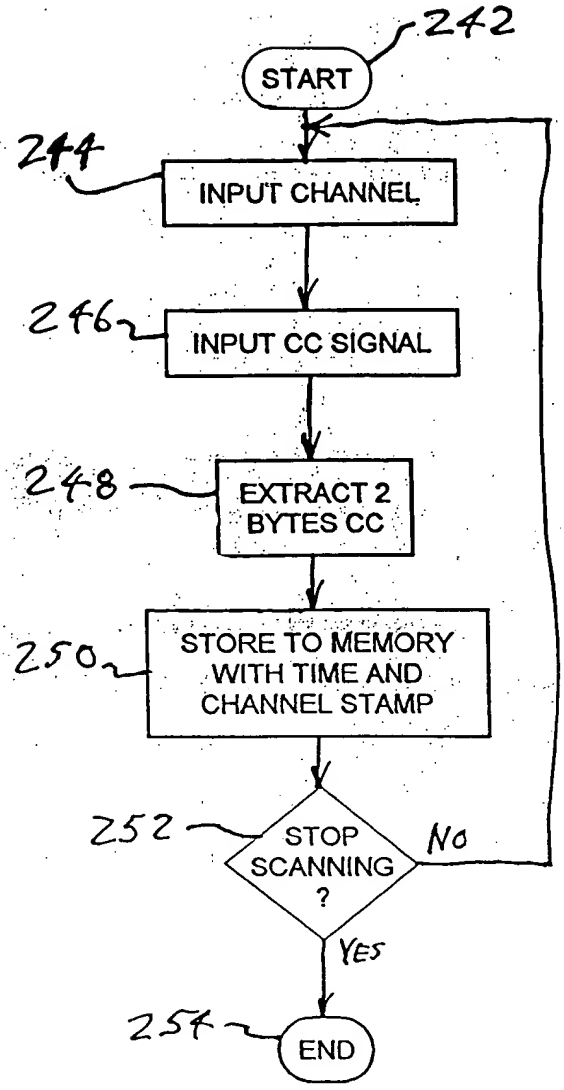

FIG. 8

0553606-050000

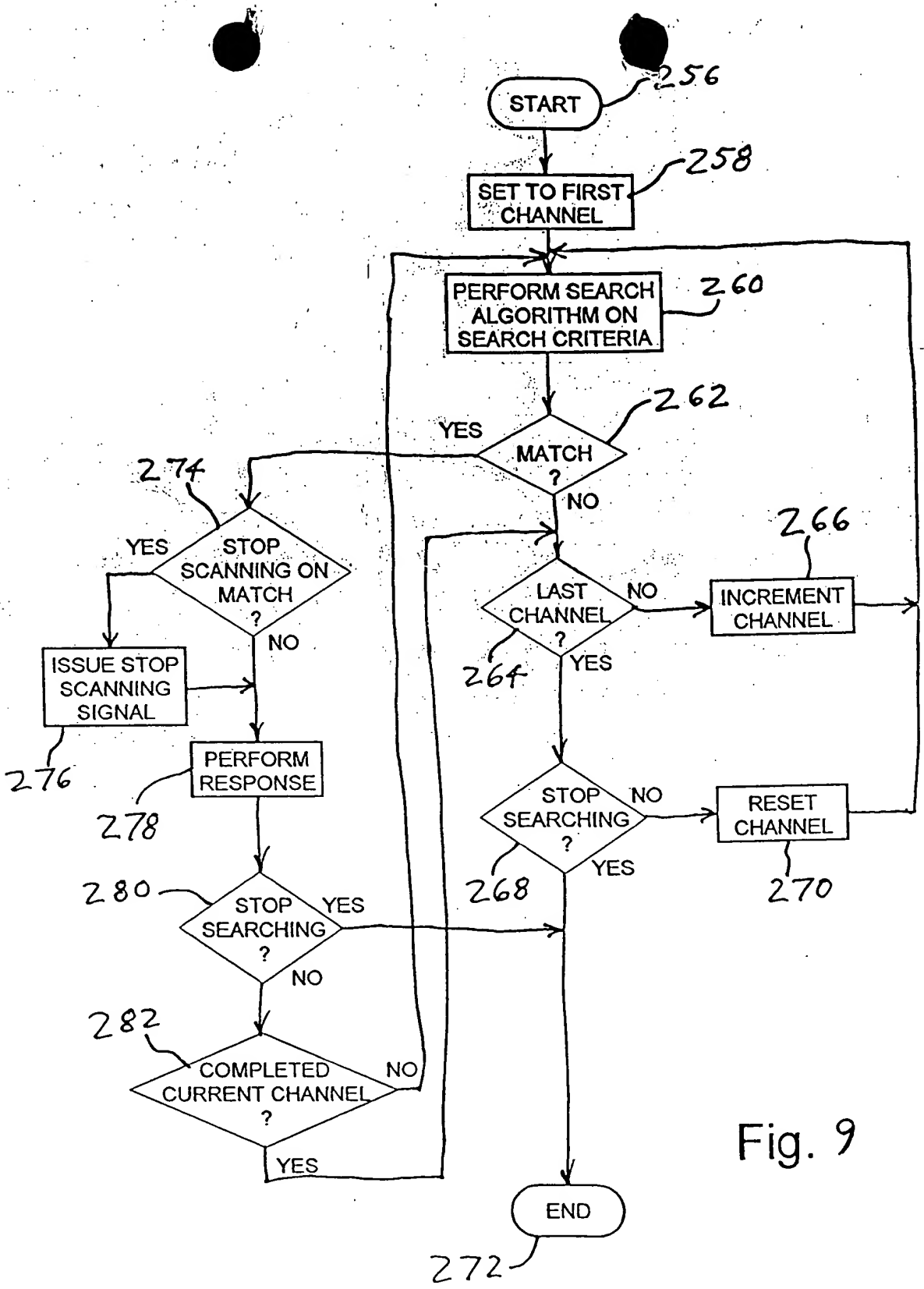
START
256
SET TO FIRST CHANNEL
258
PERFORM SEARCH ALGORITHM ON SEARCH CRITERIA
260
MATCH ?
262
YES
NO
274
STOP SCANNING ON MATCH ?
YES
NO
ISSUE STOP SCANNING SIGNAL
276
PERFORM RESPONSE
278
LAST CHANNEL ?
NO
264
YES
266
INCREMENT CHANNEL
STOP SEARCHING ?
NO
268
YES
RESET CHANNEL
270
280
STOP SEARCHING ?
YES
NO
282
COMPLETED CURRENT CHANNEL ?
NO
YES
END
272

Fig. 9